## MARYLAND HISTORICAL TRUST DETERMINATION OF ELIGIBILITY FORM

NR Eligible: yes \_\_\_\_ no \_\_\_

Property Name: Mertens Mine	Inventory Number: AL-VI-B-284
Address: Off Barbers Hill Road City: Loar Hill	Zip Code: 21532
County: Allegany USGS Topographic Map: Robert L. Blough Irrevocable Trust and Margaret Ann Owner: Blough Irrevocable Trust -mineral rights Is	Lonaconing the property being evaluated a district?yes
Tax Parcel Number: multiple Tax Map Number: 36 Tax Account ID Number: Not applicable	
Project:Agency:	
Site visit by MHT Staff:noyes Name:	Date:
Is the property located within a historic district?yes _xno	
If the property is within a district District Inventory Number:	
NR-listed districtyes Eligible districtyes District Name:	
Preparer's Recommendation: Contributing resourceyesno Non-contributing but eligible in another context	
If the property is not within a district (or the property is a district)  Preparer's Recommendation: Eligibleyes Xno	
Description of Property and Eligibility Determination: (Use continuation sheet if necessary and attach map and photo)  Introduction	
Mertens Mine is located in the Georges Creek coal basin, the easternmost of the five coal basins in Maryland. The Georges Creek basin, a 20-mile long by 5-mile wide basin situated between Big Savage Mountain on the west and Dan's Mountain on the east, straddles the border between Garrett and Allegany counties, but is located predominantly in Allegany. The other four basins, Lower Youghiogheny, Upper Youghiogheny, Castleman, and Upper Potomac, are located in Garrett County (Singewald 1911:233-4; Clark et. al 1905:321). As of 1922, the Georges Creek basin was "the most prominent producer," with most of the rest of the state's coal mined in the Upper Potomac basin (Moore 1922:372).  Within the Georges Creek basin, Mertens Mine was located on the west side of Dan's Mountain. It was operated between ca. 1900 and 1926. The mine targeted the Lower Kittanning coal seam (locally named the Davis or Six-Foot seam) and also eventually the Parker seam, which are within the Allegheny Formation, a 260- to 350-foot thick formation underlying the	
Dunkard, Monongahela, and Conemaugh formations. The Allegheny Formation was created between 290 and 320 million years ago during the Pennsylvanian Period, and consists of coal seams alternating with layers of shale, sandstone, and  MARYLAND HISTORICAL TRUST REVIEW	
Eligibility recommended Eligibility not recommended	
	BCDEFGNone
Comments:	
100110	1101-00
Reviewer, Office of Preservation Services	1   5   2009 Date
Reviewer, NR Program	Date

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limestone. Located slightly more than midway down the formation, the Lower Kittanning seam was described as "a seam of coal of great persistence" and "probably the most valuable coal next to the 'Big Vein," which was located in the Monongahela formation closer to the Earth's surface, because Lower Kittanning spans a larger area than coal seams above it and maintains its thickness (Singewald 1911:234-5; Martin 1905:241; Clark and Martin 1905:299; Clark et al. 1905:334-5). However, the importance of the Lower Kittaning seam was not evident until the turn of the twentieth century because "the 'Big Vein' was the primary source of coal in the years between 1854 and 1891" (Wesler et al. 1978:96).

Western Maryland is located within the Appalachian coalfield, which extends 800 miles from northern Pennsylvania to central Alabama (Clark 1905:232). A 1905 report called this coalfield "by far the most important of the coalfields of the United States" because it produced the most coal and was close to industrial markets in the east (Clark 1905:233-4). The northern portion of the Appalachian coalfield was developed more extensively because of its proximity to markets (Clark 1905:233-4). The coal on the west side of the Appalachian coalfield was located in flat beds, while the coal beds toward the east were folded, subjecting the coal to more heat and pressure, which resulted in a high percentage of fixed carbon compared to volatile carbon. Therefore, from west to east, the coal ranged from soft bituminous to semi-bituminous and then hard anthracite. Coal deposits were thickest on the eastern margin (Clark 1905:233-4). The Maryland coal region is located in an area of broad folds and gentle dips (Martin 1905:259-60).

#### Description

The openings to the Mertens and Beall Mines are located on the west side of Dan's Mountain and are accessed through a gate at the end of Barbers Hill Road northeast of Loartown. The mine openings are located on private property. The access road leading to the mines used to be a through road, but a culvert has been washed out and the road is no longer passable. The opening to the Beall Mine is sited east of an overgrown paved area. The Beall Mine opening is sited on the northeastern bank of a small creek. The roof of the opening is supported by a large stone lintel. Erosion has washed dirt into the opening partially filling the tunnel, but a long tunnel is still observable from the opening. A small possible man-sized opening supported by a stone lintel located northeast of the main opening may have been a scavenger mine opening, but erosion has filled this opening making it impossible for a person to enter. The opening to the Mertens Mine has collapsed. The former mine opening is located on the southwest bank of the creek, northwest of the Beall Mine opening. It appears the tunnel has collapsed judging from a large furrow extending southeast from the mapped location of the opening. Small trees and brush have grown up in the furrow. A pool of water draining into the small creek is located near the former entrance to the mine. No underground investigation was undertaken.

As mapped in the Maryland coal mining mapping project, the western entrance tunnel extends over 1,000 feet southeast horizontally through the mountain, then widens into a series of tunnels (Maryland Coal Mine Mapping Project, n.d.). No structures to support mining operations were visible near the mine entrance during the site visit. As mapped, these structures were located on the downward western slope of Dan's Mountain and at the village of Montel located at the base of the mountain.

#### History

The Development of Mining in Western Maryland

Travelers through western Maryland during the eighteenth century documented the presence of coal. In 1736, during a survey to determine the boundary of Lord Fairfax's Northern Neck land grant in Virginia, Benjamin Winslow identified two "colemines" along the north branch of the Potomac River above the mouth of the Savage River. It is assumed that the notation referred to areas where the river exposed coal seams, and not to areas where mining was occurring (Ware 1991:217). In 1789, a representative of the Potomac Company who was studying the navigational potential of the Potomac River also documented both the presence and the mining of coal in present-day Garrett and Allegany counties: "About the mouth of Savage River and George's creek are inexhaustible beds of coal; some of which the river has laid bare — we found them easy to dig, and the coal of good quality. This range or bed of coal extends along the first ridge of the Allegheny Mountain to Will's Creek, above Cumberland; from which place we saw them carrying coal for the nail manufactory, at Hagerstown" (Ware 1991:217).

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Coal mining increased during the early nineteenth century as a result of the initial accounts of the presence of coal, construction of the National Road, and improvements to the Potomac. By 1810, farmers were operating small surface or pit mines on their land at the sites of exposed outcroppings (Ware 1991:217). The veins' horizontal orientations and their locations high in the hills facilitated tunneling into the veins (Wesler et al. 1978:96). These mines were located north and east of Frostburg, near Lonaconing, near the mouths of the Savage River and Georges Creek, and east of Grantsville. One consistent buyer of Maryland coal was the U.S. Armory at Harper's Ferry, which opened in 1796 (Ware 1991:217). Coal was transported via wagon to Cumberland and then sent down the Potomac on flatboats (Wesler et al. 1978:94). Commercial mining did not expand during the early nineteenth century because capital investment was limited by an economic depression and the lack of a more reliable transportation network (Ware 1991:217).

These challenges were reduced during the 1820s. Coal and other goods were being shipped successfully down the Potomac, and in 1828, ground was broken for both the Chesapeake and Ohio Canal and the Baltimore and Ohio Railroad, which would greatly improve regional and national transportation. The same year, the Maryland Mining Company incorporated; it was the state's first incorporated coal company (Ware 1991:218). Thirty coal or coal and iron companies were incorporated within the state between 1828 and 1850 (Ware 1991:218). By 1842, three company towns had been built in the Georges Creek Valley – Eckhart Mines, Lonaconing, and Mount Savage – and were "patterned after typical English mining estates" in which paternalistic owners provided all resources and governed every aspect of workers' lives (Ware 1991:26). While the industry seemed promising and some companies were able to obtain capital from English investors, most of the incorporated companies did not go into business because construction was delayed on the railroad and the canal, preventing the companies from exploiting these new transportation routes. The railroad reached Cumberland in 1842 and the mouth of Georges Creek in 1851, and the canal did not arrive in Cumberland until 1850. Only four of the 30 corporations were operating by 1850 (Ware 1991:28, 218). During the 1850s, however, the railroad and the canal made coal mining more attractive, and most major coal companies built spur rail lines to connect to them (Ware 1991:28).

Coal mining began to expand after industrial development increased the demand for coal during the second half of the nineteenth century. New England factories began to substitute steam for water power, and iron furnaces began to burn coal. Railroads substituted coal for wood because it was more compact, and steamship navigation via oceans became possible for the same reason (Ware 1991:218). Maryland coal was exported around the world, including Cuba, France, Egypt, and Rio de Janeiro. The United States Navy preferred Maryland coal, as did the British Navy stationed in the West Indies. Maryland coal fueled the New England textile industry and steamships that stopped at Eastern seaports (Ware 1991:218-19). Between 1850 and 1910, western Maryland was a principal coal producer in the country. Production increased from 196,848 tons in 1850 to more than 4 million long tons in 1910 (Ware 1991:219). Additional company towns were built, but were less paternalistic. Some companies provided housing, while others sold vacant lots on which the miners built their own housing (Ware 1991:28).

Large-scale capitalists gradually took over the Maryland coal companies and started new companies. They included Erastus Corning, the New York iron, steel, and railroad magnate; John Murray Forbes and John F. Winslow of Boston, who produced the first heavy iron rails in the country; the Borden Mining Company; and Edward Cunard of the Cunard Steamship Line. The Consolidation Coal Company, which became the largest bituminous coal company in the United States, was initiated by William H. Aspinwall, a founder of the Pacific Mail Steamship Company. Some Consolidation directors also included Corning; Forbes; Warren Delano, maternal grandfather of President Franklin Delano Roosevelt; and James Roosevelt, the president's father (Ware 1991:219).

Foreign-born white residents never were a dominant part of the population in Allegany County, but they made up a majority of miners. The number of foreign-born county residents peaked at 21.3 per cent in 1860, but declined to 8.8 per cent in 1900 and to 4.8 per cent in 1920. Meanwhile, an 1870 survey of 2,463 miners showed that a majority were foreign-born and represented the British Isles (England, Ireland, Scotland, and Wales) and Germany. Southern and Eastern European immigrants were not present until after 1910 (Wesler et al. 1978:99-100).

By the beginning of the twentieth century, the demand for Maryland coal declined. Maryland was one of the top five bituminous coal producing states in 1880, but dropped to thirteenth among 28 states in 1906. Reasons for the decline included a belief that coal had been depleted, the opening of new coal fields to the west, and growth in the use of oil as fuel (Ware 1991:219). In the Georges Creek basin, production peaked in 1907 and declined substantially during the 1930s after most deep mines closed (Ware 1991:29).

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#### Mertens Mine ca. 1878-1926

Mertens Mine was located at the upper end of the Georges Creek Basin, on its eastern slope near Dan's Mountain (Murphy 1907b:46). The mine targeted the Lower Kittaning seam, located approximately 825 feet below the Pittsburgh or "Big Vein," which was the largest source of coal in the region during the second half of the nineteenth century, but which some in the industry believed was nearly exhausted by the turn of the twentieth century (Murphy 1905:8). The 1902-03 annual report of the state mine inspector noted that most new openings were located at the smaller veins (Carroll 1903:6). Meanwhile, however, the 1905-06 report stated that improved mining techniques led to a resurgence of interest in mining the Big Vein, and that while the Lower Kittanning seam was the most-worked of the smaller seams, "in Allegany County it is generally under such heavy cover that as yet we have few operations working it" (Murphy 1907a:12, 14).

Annual reports of the state mine inspector and periodic reports by the Maryland Geological Survey documented the history of Mertens Mine and its predecessors. The first apparent reference to this mine in the state mine inspector's annual report occurred in the 1879 report, which noted that the Grant Coal Company "opened a new vein of coal in Allegany County" the previous September that was seven feet high and contained 11,291 tons of coal per acre. The inspector did not indicate which vein, but implied it was a small vein, and noted that this mine and the other new mines targeting smaller veins were highly productive: "(T)hese figures plainly show that one acre of coal land, having all these veins on it, would be worth seven acres of the big vein coal alone" (Riordan 1880:18). The company was chartered in 1865 as the Grant Coal and Coal Oil and Lumber Company, acquired land and mineral rights at the current mine's location during the mid-1870s, and changed its name in 1880 to the Grant Coal Company (Maryland State Archives 2006; Allegany County Land Records General Index to Deeds, Etc.). Annual reports of the state mine inspector did not mention the company again. In 1897, the Allegany County Circuit Court ordered the county sheriff to sell the company's land holdings and underlying mineral rights because of delinquent taxes, suggesting the mine was no longer operating. William M. Mertens purchased the land and mineral rights, and in 1900 the Consolidation Coal Company gave him perpetual right of way through "a certain excavation or tunnel known as the 'Montell Tunnel,' situate near the village of Vale Summit" (Allegany County Land Records 82:53; Allegany County Land Records 85:620).

The 1903-04 report documented Montell Mine, operated by Summit Coal Company just east of Vale Summit along the Georges Creek & Cumberland Railroad (chartered in 1876). The company superintendent was Charles Connors of Cumberland. According to the report, the mine "was abandoned several years ago and has been recently reopened." The mine was not regulated because it employed fewer than ten miners. The report noted that management improvements would help the mine "add considerably to the output from this region" (Carroll 1905:14, 33; Mellander 1981:8). Montell Mine was not included in a 1903 list, in the annual report, of each mine's total number of miners and laborers, days worked, and mine output (Carroll 1905:34). No other information about Summit Coal Company was located, but in 1905, Mertens sold his holdings from the Grant Coal Company, as well as other land, to Wachovia Coal Company of Baltimore (Allegany County Land Records 96:450).

The mine's new ownership was documented again in the 1904-05 report, which noted that Wachovia "was recently organized." The company's president was W.J. Young of Greensboro, N.C., and its superintendent was W.H. McClure of Cumberland. The report noted that the mine was located one mile east of Vale Summit along the Georges Creek & Cumberland Railroad and had been abandoned "a good many years ago." The mine contained one opening, the drift type, in which a tunnel was dug at the same elevation as the coal seam so that the coal was approached horizontally. Montell was one of only two mines in the county, out of a total of 37, with one opening. The most common number of mine openings was two; the next most common were three through five openings. One had seven openings and one had eight (Murphy 1905:9, 33, "Ventilation, Haulage, Improvements, Etc., in Allegany County," "List of Mining Officials in Allegany County").

During this reporting period, the drift mine was the predominant type of mine in Allegany County (Kubach 2008). Horses did the hauling. Improvements to the mine included the installation of puncher mining machines, construction of an airway to improve its natural ventilation, construction of a "Phillips Cross Over" dump with pole weights, and installation of railroad tracks. "Other outside buildings" also were built during the reporting period. As with the previous year, the mine employed too few men – nine at the time of this report – to be governed by mining regulations (Murphy 1905:9, 33, "Ventilation, Haulage, Improvements, Etc., in Allegany County"). General summary information was repeated in the 1905-06 report (Murphy 1907a:50).

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By the first half of 1907, the mine was still named the Montell Mine, but the landowner was noted to be Fred Mertens Sons, and Wachovia's president was John H. Mertens of Cumberland. The mine continued to consist of one opening that worked the Lower Kittanning seam, the only mine in the upper Georges Creek Basin that worked this seam. The number of one-opening mines increased to five, of a total of 39 mines, but the most common numbers of openings were two and three openings. The Georges Creek & Cumberland Railroad continued to provide rail transportation, although the Western Maryland Railroad purchased its stock in 1907 (Mellander 1981:8). The number of employees increased to 30. Puncher machines were still in use; 85 per cent of the mine's output was produced this way. The mine was more productive than it had been during its entire existence (no report stated when the mine was first dug), and produced more than six times its output of the previous year (Murphy 1907b:46-7, "List of Executive Mine Officials, Ownership of Coal, Transportation, etc.," "List of Officials of Coal and Clay Mining Corporations in Maryland"). "It is gratifying to note this improvement," the 1906-07 annual report stated, "because of the prejudice existing in the minds of many against anything in the shape of coal except Georges Creek Big Vein" (Murphy 1907b:46). The report noted that the machines contributed to inadequate ventilation because they created dust and smoke, but also noted that the mine was still kept in "good" condition (Murphy 1907b:46-7).

A short description of Wachovia Coal Company written shortly after 1907 stated that the mine apparently also was called Waco mine, possibly a shortened version of the company name, Wachovia. In addition, the mine employed an average 52 employees throughout 1907 (Preservation Society of Allegany County, Inc.1981).

The mine was operating during the 1908-09 reporting year, even though an economic depression resulted in "poor work during the year" and "dullness of the coal trade for the past year" that forced several mines to suspend operations, according to the annual report for that period. Based on a chart of 1908 employment and output statistics for Allegany County mines, the mine employed 32 men during 1908, operated 156 days, and produced 6,975 tons, slightly more than half of which was machine-mined. Montell was one of only four mines in the county that machine-mined; the other 50 mines in operation during 1908 conducted only pick mining. The Montell Mine was within the majority of mines that employed between 10 and 100 workers, and in the lower half of the county's output, representing mines that produced less than 20 tons (Donahue 1909:5, "Statistics of the Production of Coal in Maryland in 1908").

The operation continued to be successful. The mine was advertised in a 1910 publication, targeted to coal buyers, that listed bituminous and semi-bituminous mines east of the Mississippi River (Rose 1910:73). According to the 1910-11 annual report, the company made "many and expensive improvements" during that period (Donahue 1911:68). For instance, extension of the main heading through the mountain improved the mine's ventilation. The tunnel was extended into the seam below the Lower Kittanning, the Parker seam. The mine's features included an air compressor and engine for mining and hauling, a new boiler and engine house, 3,000 feet of air line, and 15 double-block employee dwellings. "Montell Mine in the future will be one of the leading mines in the region," the annual report pledged (Donahue 1911:68). While the coal-mining industry's production level dropped from 1910 to 1911 as a result of the lingering effects of the economic depression, Montell was still operating (Donahue 1912:5).

The mine's ownership and name changed, and it was expanded. Wachovia sold the mine to the Maryland-Georges Creek Coal Company in 1912 (Allegany County Land Records 110:657-666), and the name of the mine changed from Montell to Mertens. It is unknown whether members of the Mertens family were part of the leadership structure of the new company, as they were with Wachovia (Walters 1913:35). A 1912 map noted that the mine was located "at Mertens Station," likely the name of the railroad stop at the mine (Allegany County Equity Records 1917). The mine expanded to two openings, Mertens Mines 1 and 2, and continued to work the Lower Kittanning coal seam, but now also worked the Parker seam located below it. As a result, the mine doubled its production and employed 76 men. The mine inspector praised the mine's sanitation as "an example to all others in the state," and noted as an example that the trapdoors, brattices, overcasts, lye timber, and narrow areas were whitewashed. The inspector also noted that the mine was satisfactorily ventilated (Walters 1913:36).

Throughout its remaining years of operation, the mine maintained two openings and remained the only mine working the Lower Kittanning seam (it also continued to work the Parker seam), but the mine's production and employment totals fluctuated. From May 1913 to May 1914, the mine employed only 13 men working 150 days, and produced 12,900 tons of coal (Walters 1914:26). During the following 12-month period, the mine employed 20 men for 60 days who produced 3,600 tons (Walters 1915:24). All of the coal produced during these two periods was through pick mining; no coal was mined

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through machine mining, suggesting that the earlier use of punch machines had ended (Walters 1914:"Statistics of the Production of Coal and Fire-Clay for the Year 1913 for Allegany and Garrett Counties"; Walters 1915: "Statistics of the Production of Coal and Fire-Clay for the Year Ending December 31st, 1914, for Allegany and Garrett Counties"). During 1916, however, the mine employed 69 men and produced 35,353 tons (Casey 1917:103).

A state mine inspector's annual report from this period described the procedure for mining the coal. Using oil and carbide for illumination, miners loosened the coal with picks. Black powder was ignited to create an explosion to release the coal, after which mules gathered and hauled the coal to a side track in the interior of the mine. A compressed-air hoist lowered the coal down a slope. Coal from Mine No. 1 was hauled by gasoline motor down a 3,200-foot tunnel to a tipple, where it was dumped into rail cars for transport over the Cumberland and Georges Creek Division of the Western Maryland Railroad (The Western Maryland Railroad assumed the operations of the Georges Creek and Cumberland Railway in 1913). The hoist carried coal from Mine No. 2 to a side track, where it also was dumped into the railroad cars (Casey 1917:103-4; Mellander 1981:9).

The mine's owner, the Maryland-Georges Creek Coal Company, went into receivership in January 1917, and the mine was purchased in August 1918 by the North Maryland Coal Mining Company, based in Pittsburgh, although the new owner was listed earlier, in the state mine inspector's annual report of May 1917-May 1918 (Baker 1922:219; Casey 1918:52). According to this report, the mine consisted of 1,800 acres along the Lower Kittanning seam and 2,000 acres along the Parker seam, and the mine produced 41,831 tons in 1917 (Casey 1918:44, 52). The new owner made improvements in 1918, including installing a Ridgeway generator motor and a hauling motor; equipping the mine with electric machinery; and installing a link belt picking table to clean the coal. In addition, the report noted that the mine did not use black powder or dynamite, "only permissible explosives" (Dunn 1919: "Allegany County Improvements for 1918"). However, production declined. In 1918, 76 miners and laborers mined 56,366 tons of coal, but a strike closed the mine for most of 1922. In 1923, 59 men working 50 days produced 10,000 tons. That year, the mine's untapped yield spanned 5,300 acres, but in 1924, only 22 men worked 83 days and produced 5,202 tons. In 1925, eight men working 10 days produced 100 tons, but in 1926, eight men working 109 days machine-mined 1,572 tons. During the 1920s, the mine stopped working the Parker seam and focused only on the Lower Kittanning seam, and had only one opening by 1926 (Baker 1922:220; Rutledge 1923:44, 63; Rutledge 1924:52; Rutledge 1925:53; Rutledge 1926:55).

The mine was abandoned during the late 1920s. The Maryland Bureau of Mines 1926 annual report stated that the mine was abandoned during that year (Rutledge 1926:15, 55). The mine was not discussed in the 1927 annual report, but appeared in the 1928 annual report on a list of mines "worked out" and abandoned during that year, possibly referring to the mine's status, rather than an action by the mine owner, North Maryland Coal Mining Company (Rutledge 1928:19). A map dated 1938 showed the location of the Beall Mine on or in the immediate vicinity of the North Maryland Coal Mining Company holdings, and the Loar Family Fuel Mine on family holdings in the vicinity (Maryland Coal Mine Mapping Project 1938). In 1941, North Maryland Coal Mining Company conveyed 3,173 acres to The Crichton Company, including most of the underlying coal and mineral rights, as well as support structures and equipment such as "tipples, mines, hoists, tracks, side-tracks, ram-ways, mine cars, tools, appliances, boilers, engines, machinery and appurtenances of every kind and description thereunto belonging" (Allegany County Land Records 192:319). In 1967, The Crichton Company, based in Delaware, sold the land, mining rights, and equipment purchased in 1941 to Penvir Realty Company, a Pennsylvania company whose officers included members of the Crichton family (Allegany County Land Records 383:548). Penvir Realty Company sold it in 1967 to Robert L. and Margaret Ann Blough of Pennsylvania, who in turn conveyed it in 2003 to their three children as trustees of two trusts (Allegany County Land Records 411:525; Allegany County Land Records 717:496).

#### Significance

Mertens Mine is an example of small-scale drift mine operating in Allegany County during the first two decades of the twentieth century. Active between ca. 1900 and 1926, the mine tapped secondary coal seams in the region, the Lower Kittaning and the Parker seam. Throughout its operation, coal production of the mine ranked at the lower end of coal mining production statistics for Maryland and the mine generally employed about 30 men. As a small mine, Mertens Mine does not appear to possess individual significance to illustrate mining operations in Allegany County applying National Register Criterion A (Noble and Spude 1992:15-17). No documentation suggests that the mine played a specific significant role in the social or economic evolution of the county. No above-ground mining support structures are associated with the mine nor does the mine appear to exhibit technological advances applying National Register Criterion C. Associated mining support structures would

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have been located on the western side of the mountain in the direction of the village on Montel. The mine does not appear to be associated with significant persons of history applying National Register Criterion B.

#### References

Allegany County Equity Records

1917 Trustee's Exhibit, Plat 1, Equity 7974

Allegany County Land Records

Baker, William A., Jr.

"Methods of Mining Employed in the Coal Mines of Maryland," in Maryland Geological Survey, Volume 11. The Johns Hopkins Press, Baltimore, Md.

Carroll, James P.

1903 Annual Report of the Mine Inspector for Allegany and Garrett Counties, Maryland Covering the Period from January 1, 1902, to May 1, 1903. The Midland Press, Midland

Carroll, James P.

1905 Fourth Annual Report of the Mine Inspector for Allegany and Garrett Counties. Sun Job Printing Office, Baltimore, Md.

Casey, John L.

1917 Annual Report of the Mining Inspector of the State of Maryland. Monumental Printing Company, Baltimore, Md.

1918 Annual Report of the Mining Inspector of the State of Maryland. King Bros., Baltimore, Md.

Clark, William Bullock

"Origin, Distribution and Uses of Coal," in Maryland Geological Survey, Volume Five. The Johns Hopkins Press, Baltimore, Md.

Clark, William Bullock and George C. Martin

"Correlation of the Formations and Members," in Maryland Geological Survey, Volume Five. The Johns Hopkins Press, Baltimore, Md.

Clark, William Bullock, George C. Martin, and J.J. Rutledge

"Distribution and Character of the Maryland Coal Beds," in Maryland Geological Survey, Volume Five. The Johns Hopkins Press, Baltimore, Md.

Donahue, John H.

1909 Annual Report of the Mine Inspector for Allegany and Garrett Counties, Maryland. Evening Times Print, Cumberland, Md.

1911 Annual Report of the Mine Inspector for Allegany and Garrett Counties, Maryland. Evening Times Press, Cumberland, Md.

1912 Annual Report of the Mine Inspector for Allegany and Garrett Counties, Maryland. Evening Times Press, Cumberland, Md.

Dunn, Lawrence

1919 Annual Report of the Mining Inspector of the State of Maryland. 20th Century Printing Co., Baltimore, Md.

Kubach, Charles

2008

"Types of Underground Coal Mines." Accessed 10 October at www.mineengineer.com/mining/coal/undergnd\_mining.htm Martin, George C.

1905 "Geology of the Maryland Coal District," in Maryland Geological Survey, Volume Five. The Johns Hopkins Press, Baltimore, Md.

Maryland Coal Mining Mapping Project

1938 "Map Showing Beall Mine and Loar's Fuel Mine near Montell, Allegany Co., Md." Available at www.frostburg.edu/minemapping/maps/rut078.jpg

Maryland State Archives

2006 Session Laws, 1880, in Archives of Maryland Online, Vol. 395, p. 247. Available at www.aomol.net/html/index.html

Mellander, Deane E.

1981 Rails to the Big Vein - The Short Lines of Allegany County, Maryland. Potomac Chapter, National Railway Historical Society.

Moore, Elwood S.

1922 Coal: Its Properties, Analysis, Classification, Geology, Extraction, Uses and Distribution. John Wiley and Sons, Inc., New York.

Murphy, Thomas

1905 Report of the Mine Inspector for Allegany and Garrett Counties, Maryland. The Georges Creek Press, Lonaconing, Md.

1907a Annual Report of the Mine Inspector for Allegany and Garrett Counties, Maryland to his Excellency Governor Edwin Warfield for the Year 1905/06. The Georges Creek Press, Lonaconing, Md.

1907b Annual Report of the Mine Inspector for Allegany and Garrett Counties Maryland to his Excellency Governor Edwin Warfield from May 1, 1906, to May 1, 1907. C.T. Clayton, Lonaconing, Md.

Noble, Bruce J., Jr., and Robert Spude

1992 National Register Bulletin 42: Guidelines for Identifying, Evaluating, and Registering Historic Mining Properties. U.S. Department of the Interior, National Park Service, National Register of Historic Places, Washington, D.C.

Preservation Society of Allegany County, Inc.

"The Wachovia Coal Company," in "Coal History" section of Alleghany County History, Vol. 1.

Riordan, Owen

1880 Second Annual Report, Owen Riordan, Inspector of Mines, for Allegany and Garrett Counties, for Year Ending December 31<sup>st</sup>, 1879. William T. Inglehart & Co., Annapolis, Md.

Rose, B.H.

1910 Coal Mines 1910. Published by author, Cleveland, Ohio.

Rutledge, John J.

1923 First Annual Report of the Maryland Bureau of Mines of the State of Maryland. 20th Century Printing Co., Baltimore, Md.

1924 Second Annual Report of the Maryland Bureau of Mines of the State of Maryland. 20th Century Printing Co., Baltimore, Md.

1925 Third Annual Report of the Maryland Bureau of Mines of the State of Maryland. 20th Century Printing Co., Baltimore, Md.

1926 Fourth Annual Report of the Maryland Bureau of Mines of the State of Maryland. 20th Century Printing Co., Baltimore, Md.

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1928 Sixth Annual Report of the Maryland Bureau of Mines of the State of Maryland. 20<sup>th</sup> Century Printing Co., Baltimore, Md.

Singewald, Joseph T.

1911 The Iron Ores of Maryland, with an Account of the Iron Industry. Ph.D dissertation, Johns Hopkins University, published by the Johns Hopkins Press, Baltimore, Md.

Walters, William

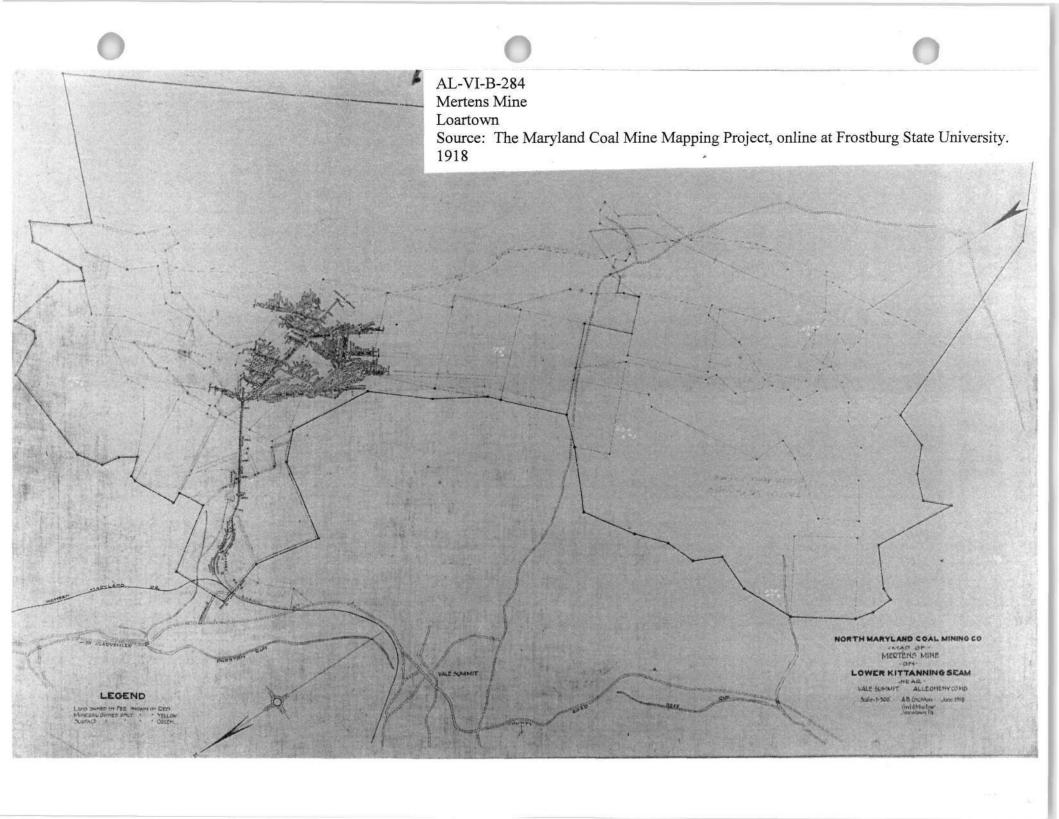
- 1913 Annual Report of the Mine Inspector for Allegany and Garrett Counties, Maryland. Daily News Press, Cumberland, Md.
- 1914 Annual Report of the Mine Inspector for Allegany and Garrett Counties, Maryland. Thomas & Evans Printing Company, Baltimore, Md.
- 1915 Annual Report of the Mine Inspector for Allegany and Garrett Counties, Maryland. Thomas & Evans Printing Company, Baltimore, Md.
- Ware, Donna M., with contributions by Orlando Ridout V, Geoffrey B. Henry, and Mark R. Edwards
  - 1991 Green Glades and Sooty Gob Piles: The Maryland Coal Region's Industrial and Architectural Past.
    Maryland Historical Trust, Crownsville, Md.
- Wesler, Kit W., Dennis J. Pogue, Aileen F. Button, Robert J. Hurry, Gordon J. Fine, Patricia A. Sternheimer, and E. Glyn Furgurson
  - 1978 The M/DOT Archeological Resources Survey, Volume 4: Western Maryland. Maryland Historical Trust Manuscript Series, No. 8.

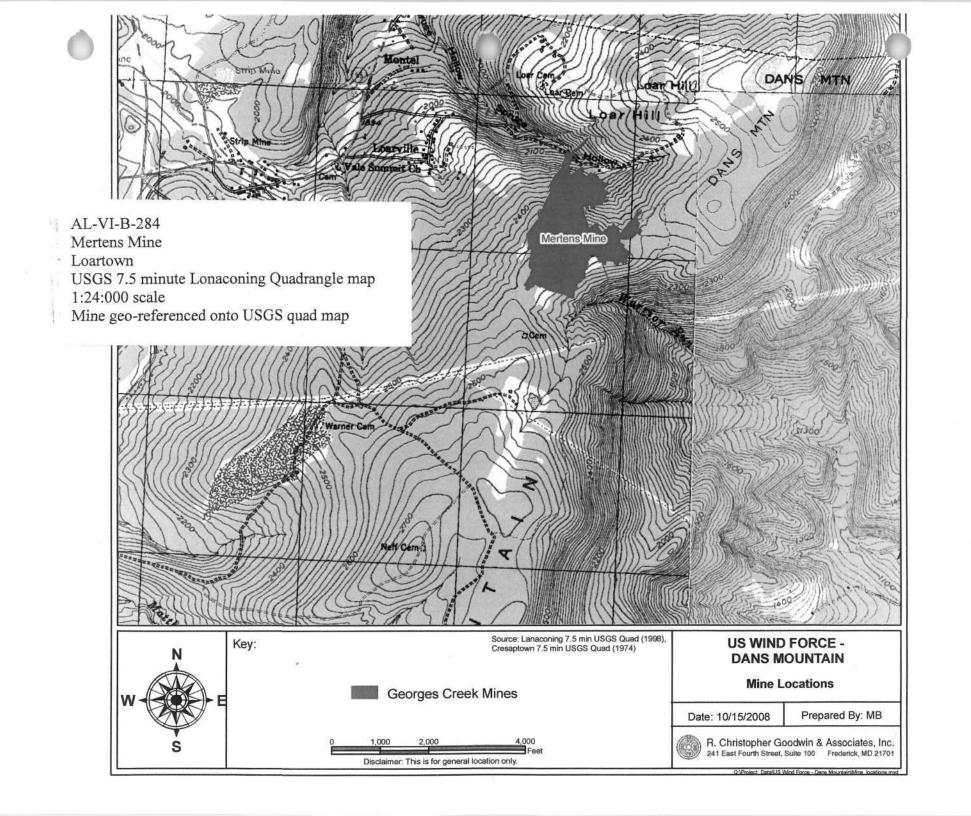
Christine Heidenrich, M.A., Historian; Benjamin Riggle, M.S., Historian; Katherine Grandine,

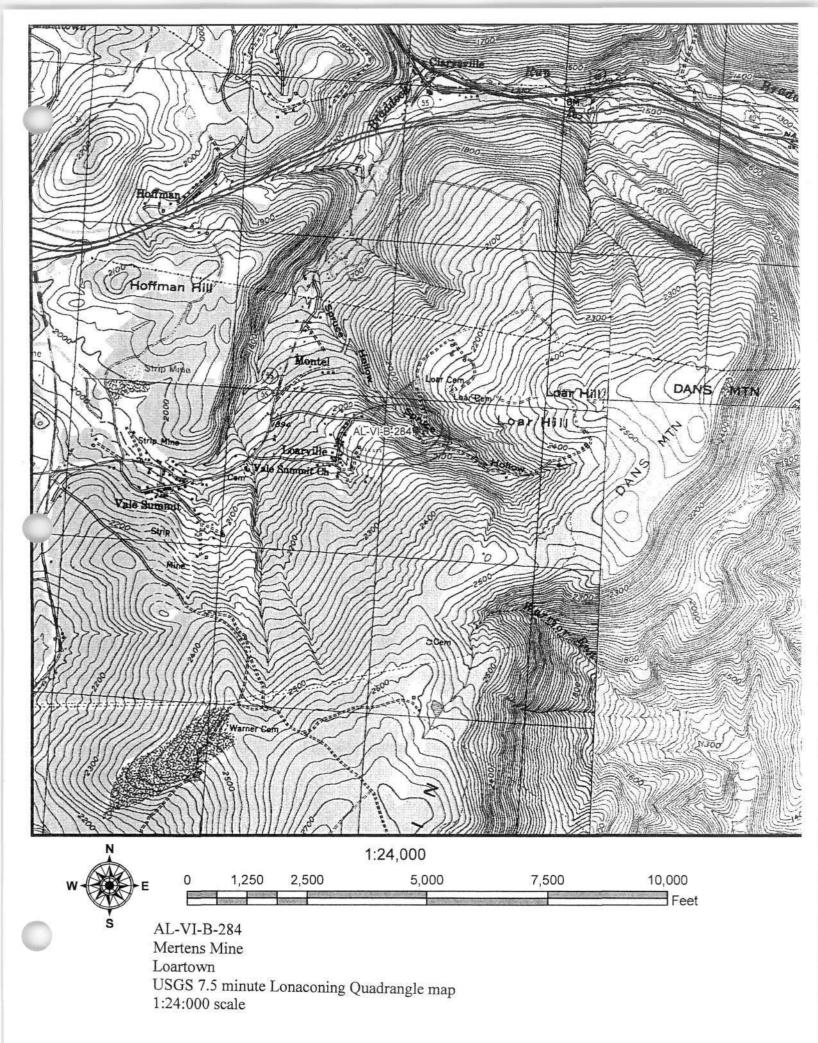
Prepared by:

M.S., Senior Historian

Date Prepared: 20 October 2008







# Maryland Historical Trust Maryland Inventory of Historic Properties Form

Inventory No. AL-VI-B-284

Mertens Mine, Allegany County Continuation Sheet

Number Photo Log Page 1

The following information is the same for each photograph:

- 1. MIHP # AL-VI-B-284
- 2. Mertens Mine
- 3. Allegany County, Maryland
- 4. R. Christopher Goodwin & Associates, Inc.
- 5. September 2008
- 6. MD SHPO
- 7. Photo paper and ink: HP Vivera ink 97 Tri-Color cartridge, 101 Blue Photo cartridge, and 102 Gray Photo cartridge on HP Premium Photo Paper (high gloss)
- 8. Verbatim Ultralife Gold Archival Grade CD-R, PhthaloCyanine Dye

Photo #

AL-VI-B-284\_2008-09-17\_01.tif – Mine opening facing north AL-VI-B-284\_2008-09-17\_02.tif – Inside mine opening facing north

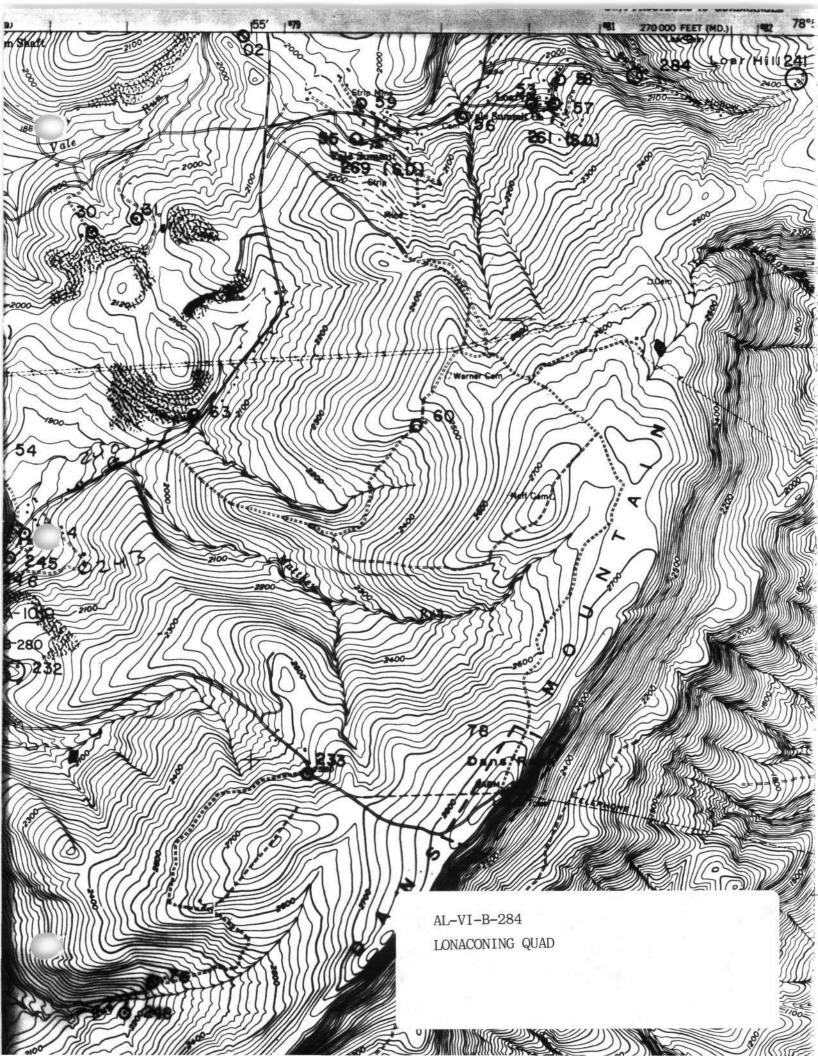


AL-VI-B-284
Mine near Lourville
Allegany County, MD
Benjamin M. Riggle
09-17-2008
MD SHPO AL-VI-B-284\_2008-09-17\_01
Mine opening facing north
Photo #1 of Z



AL-VI-B-284 Mine near Loarville Allegany County, MD Benjamin M. Riggle MD SHPO AL-VI-B-284\_2008-09-17-02 09-17-2008 Inside mine opening facing north Photo #2 of 2







AL- VI-8-284



AL- VI-8- 284